

Notice of Allowability

Application No.

09/819,827

Applicant(s)

KAKIHARA ET AL.

Examiner

Art Unit

Susanna M. Diaz

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's after-final amendment filed 6/15/04, which has been entered.
2. ☒ The allowed claim(s) is/are 1-8, 10, 11 and 33.
3. ☒ The drawings filed on 29 March 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____

Susanna M. Diaz
SUSANNA M. DIAZ
PRIMARY EXAMINER

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Reasons for Allowance

1. Claims 1-8, 10, 11, and 33 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The closest prior art of record are the following references: Widl (U.S. Patent No. 5,721,678); Westerlage et al. (U.S. Patent No. 5,694,322); and Sakurai et al. (U.S. Patent No. 5,675,494).

Widl discloses a use billing system in which vehicle movement is tracked by GPS (Global Positioning System). This tracked movement is assessed to determine whether or not a vehicle has entered a toll zone in order to calculate any accumulated tolls accordingly. However, Widl merely differentiates between a toll and a non-toll zone; Widl does not expressly make any concessions for a moving body which has moved from a charge applicable area to a buffer area and then back to the same charge area again such that "an entry into the charge applicable area is prohibited in the generating means" (i.e., double billing is prevented when a moving body exits a charge applicable area to a buffer area and subsequently reenters the same charge applicable area). In Widl's invention, a vehicle that exits and subsequently reenters a toll area would be charged for both an exit and an additional reentry fee. In other words, double billing is not expressly prevented.

Westerlage too tracks a vehicle's movement throughout various "taxing regions" and accumulates charges for all regions accordingly. However, Westerlage's assessment of charges is based on a distance traveled through each taxing region.

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There is no mention of prevention of double billing, especially since entry and exit points are not of issue due to the map matching technique utilized by Westerlage to correlate the vehicle's GPS determined position to the mapped taxing regions.

Sakurai is directed toward a toll collection system that prevents double toll charging; however, double toll charging (i.e., double billing) is prevented "for a predetermined period of time after the vehicle leaves the toll chargeable area" (col. 8, lines 9-10). Instead, the claimed invention prevents double billing based on predetermined map information that explicitly differentiates charge applicable from buffer areas and a determination that a moving body moved from a charge applicable area to a buffer area and then back to the same charge applicable area. There is no time element involved in the prevention of double billing in the claimed invention nor is there any assessment of predetermined map information and a moving body's passing through a predetermined "buffer area" as a condition to prevent double billing in Sakurai.

In summary, claims 1-8, 10, 11, and 33 are deemed to be allowable over the prior art of record because the prior art of record is not seen, either alone or in combination, as teaching or suggesting a charging device which comprises means for detecting the position of a moving body, means for determining a charge applicable area in a predetermined map and for determining a buffer area (which is defined by a first boundary line of a charge applicable area and a second boundary line around the first boundary line and is located adjacent to the charge applicable area and an area other than the charge applicable area), ***means for deciding whether the moving***

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body has entered into the charge applicable area or the buffer area by matching the map information with the position information, and means for generating charge information based on the result of the decision by the deciding means, such that, ***when a history of the entry state is one in which the moves body moves from the charge applicable area to the buffer area and then back to the same charge applicable area again, generating of charge information relating to an entry into the charge applicable area is prohibited in the generating means***. More particularly, it is the combination of the details of how double billing is prevented in the claimed moving vehicle charging system (i.e., by comparing the moving body's actual position to charge applicable areas and buffer areas identified in predetermined map information and preventing double billing when the moving body leaves a charge applicable area, enters a buffer area, and then reenters the same charge applicable area) that makes the claimed invention allowable over the prior art of record. The details addressing this allowable feature are recited in claims 1-8, 10, 11, and 33.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna M. Diaz whose telephone number is (703) 305-1337. The examiner can normally be reached on Monday-Friday, 9 am - 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

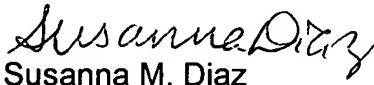
**Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450**

or faxed to:

(703) 872-9306 [Official communications; including
After Final communications labeled
"Box AF"]

(703)746-7048 [Informal/Draft communications, labeled
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 22202, 7th floor receptionist.


Susanna M. Diaz
Primary Examiner
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July 1, 2004